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SUPREME COURT OF THE UNITED STATES.

No. 12, Original.—October Term, 1930.

State of Connecticut, Complainant,
vs.
Commonwealth of Massachusetts, Defendant.

[February 24, 1931.]

Mr. Justice Butler delivered the opinion of the Court.

The State of Connecticut brought this suit against the Commonwealth of Massachusetts to enjoin her from diverting waters from the watershed of the Connecticut river to provide water for Boston and neighboring cities and towns.

Legislation of Massachusetts authorizes diversion into the Wachusett reservoir of the flood waters of the Ware river, c. 375, Laws 1926, and of certain waters of the Swift river, c. 321, Laws 1927. The watersheds of these rivers are about midway between the Boston district and the westerly boundary of the Commonwealth. They are tributaries of the Chicopee; all are non-navigable streams wholly within Massachusetts. The Chicopee empties into the Connecticut just above Springfield. The latter rises in Canada and northern New Hampshire. It flows between New Hampshire and Vermont through Massachusetts and Connecticut into Long Island Sound. It is about 345 miles long and drains 11,300 square miles of which 1,385 are in Connecticut.

The complaint alleges:

Connecticut and Massachusetts recognize the common law doctrine that riparian owners have the right to the undiminished flow of the stream free from contamination or burden upon it. Connecticut appears as owner of riparian lands and of the bed of the river and as *parens patriae*. The proposed diversion will take water tributary to the Connecticut entirely out of its watershed, will impair navigability of that stream, will take flood waters and thereby cause damage to agricultural lands that are subject to yearly inundation. The Connecticut is now heavily burdened with

offensive matter put into the river in Massachusetts and requires all the water that naturally comes down the river to prevent it from becoming a nuisance and menace to public health. The diversion will destroy property of Connecticut and of its inhabitants without due process of law and cause injury for which there is no adequate remedy at law. The diversion presently proposed is only a portion of that covered by the plan adopted by Massachusetts which includes the acquisition of the waters of other tributaries of the Connecticut.

By its answer and amendments thereto Massachusetts denies that the proposed diversion will cause any injury or damage, and avers that the amount of water to be taken is negligible when compared with the flow of the river where it enters Connecticut, that an emergency exists in Massachusetts constituting a justification for a reasonable use of such waters, that the serious injury to the people of the Commonwealth if diversion be prohibited compared to the trivial damage possibly caused to Connecticut and its people if diversion is permitted should lead a court of equity to give substitutional relief rather than that specifically prayed, that Connecticut's contention that the diversion will interfere with navigation is not open in the absence of proof that Massachusetts has diverted or actually proposes to divert more water than is permitted by the War Department, that the proposed diversion is in all respects a reasonable use of the waters in question and that the project will stabilize the flow of the river and result in benefit to Connecticut and the lower riparian owners.

By its reply, Connecticut denies Massachusetts' affirmative allegations and alleges that there is no necessity for the diversion and that there is an adequate supply of water in the eastern part of Massachusetts.

The court appointed Charles W. Bunn of Minnesota as special master and authorized him to take and report to the Court the evidence together with his findings of fact, conclusions of law and recommendations for a decree. The master filed his report and the evidence introduced by the respective parties. It shows that he heard arguments in their behalf, and sets forth his findings and conclusions with a recommendation that the bill be dismissed and that (if it be held that lack of present purpose further to develop power at King's Island does not warrant denial

of injunction on that ground) the decree contain a provision for the protection of the owner of the dam and power at that place. Connecticut filed numerous exceptions. Massachusetts made no objection to the report. The Court has heard the arguments of counsel and considered their briefs for and against the exceptions and upon the final submission of the case.

The report shows that Connecticut sought to prove that any subtraction from the flow of the Connecticut river through that State will cause serious damage to the State and its people in that it will impair the navigability of the stream, lessen productivity of river bottom lands by diminution of inundation during times of high water in each year, diminish the power capable of development at King's Island, diminish the run of shad in the river and decrease its capacity to discharge and destroy sewage.

The brief substance of the master's findings of fact follows:

Boston and the surrounding metropolitan area are faced with a serious water shortage in the near future and there is need for a large quantity of additional water. That district includes 35 cities and towns having a population of 1,900,000. Other nearby cities and towns are likely in the future to depend on that district for water supply. The total population concerned is now 2,860,000 and it is estimated that it will reach 4,572,000 within forty years. There is no serious dispute about the need of the region to provide presently for additional water.

Massachusetts applied to the Secretary of War (Act of March 3, 1899, § 10, 30 Stat. 1151) for authority to make the proposed diversions. After hearing both sides and examining the facts, the Secretary permitted diversion of the flood waters of the Ware in excess of 85 million gallons per day between October 15 and June 15 and prohibited the taking of any water except during that period. He permitted diversion of all waters of the Swift except enough to maintain a flow therein of 20 million gallons per day; but he required that, during the period from June 1 to November 30 there shall be released from the impounding dam 110 cubic feet per second (71 million gallons per day) whenever the flow of the Connecticut at Sunderland, Massachusetts (a town 20 miles north of the confluence of the Chicopee and Connecticut) is 4650 cubic feet per second or less, and 70 cubic feet per second (45 million gallons per day) when the flow is more than 4650 and

less than 4900 cubic feet per second. The Secretary found that the discharge at Sunderland of 4650 cubic feet per second corresponds to an average gauge height at Hartford of two feet and that a discharge of 4900 cubic feet per second corresponds to 2.1 gauge height at Hartford.

The annual flow of the Connecticut at the Massachusetts-Connecticut boundary is about 17,000 cubic feet per second, approximately 11,000 million gallons a day. The watershed above that boundary is 9,915 square miles. The drainage of the Ware at the point of diversion on that river is 98 square miles and that of the Swift at the point of diversion is 186 square miles. The diversion permitted by the Secretary will furnish about 191 million gallons per day. The Massachusetts Acts do not authorize the diversion of any waters other than the Ware and Swift and as to these the record shows that (as far as counsel can commit it) Massachusetts proposes to abide by the War Department requirements and restrictions.

The total area subject to such diversions is 2.93 per cent. of the watershed above Connecticut. The permitted diversions represent an average yearly subtraction from the flow of the Connecticut at the state line of about two per cent; but 94 per cent. of this occurs when the Hartford gauge reads above 3.5 feet which means 11.5 feet depth of water. The Government has heretofore sought to maintain 10 feet of water below Hartford. A War Department project contemplates a 12 foot channel. (On that bottom level, 3.5 feet on the gauge would mean 13.5 feet of water.)

Dredging is required every year to maintain a channel of 10 feet over numerous bars below Hartford. Navigation is difficult when the depth falls below 10 feet. There is no difficulty when there is 12 or even 11 feet. The required release of water from the Swift river reservoir during periods of low water will somewhat benefit navigation. The maximum diversions are at high water and lessen depth five to six inches. At medium stages the diversion is less and at very low stages the flow is increased. The diversion will not perceptibly or materially interfere with navigation.

The height of floods will be lessened from one to six inches. Because of the diversion, small pieces of hay land will fail to receive flood waters. It is impossible to determine from the evidence to what extent that will occur. The lessening of spring floods will

have its advantages and disadvantages; it will reduce some damages and increase others. The damage to the hay land is not shown to be of serious magnitude; and, far from being established by clear and convincing evidence, it is not shown by evidence making it possible of computation or proving that it is large.

There is shown one possible development of power. It is at King's Island in Connecticut where 4,000 horsepower is now produced. The owner has been authorized by the Federal Power Commission to build a higher dam to develop approximately 50,000 horsepower. It is not shown that the company has determined so to do, or that the necessary capital has been arranged for. The present use of the water for power purposes will not be disturbed by the diversion. If waterpower shall be developed to the extent of 50,000 horsepower, the diversion will cause an injury of $80,000.

Connecticut failed to establish that the taking of flood waters will be materially injurious to the shad run or that the diversion will perceptibly increase the pollution of the river.

The legislative determination to use the waters of the Ware and Swift was made and the Acts of 1926 and 1927 were passed as the result of long-continued and careful study. Connecticut submits two plans to show that the northeastern part of Massachusetts has abundant supplies of water for the Boston district.

The first involves combining water from 15 watersheds on the Assabet, Sudbury, Shawsheen and Ipswich rivers. The plan involves pumping and also treatment of the water for its purification. From an engineering standpoint it is inferior to that adopted for the Ware-Swift development. And, while a considerable amount of water from these sources may be made available, most of it is of a quality much inferior to the waters of the Ware and Swift. And the amount would be inadequate and constitute only a part of the needed supply. The operation of the plan would be of uncertain duration and might have to be abandoned.

The second plan is based on the taking of water from the Merrimack. That stream drains a large watershed mainly in New Hampshire. It is polluted and the pollution is practically beyond the control of Massachusetts. There is no certainty of its improvement or that it will not become worse. Unquestionably, polluted water may be made wholesome by proper treatment. A considerable amount of industrial waste from mills, cellulose plants,

tanneries, rendering works and gas works, of which there are many in New Hampshire, is peculiarly difficult to eliminate from water. The necessary treatment of waters so polluted involves several processes — storage for 30 to 90 days in a large reservoir, aeration, filtration, chlorination. These introduce a human element subject to weaknesses and failures of human nature. Instances of breakdowns are given. There is a small element of danger involved in every elaborate system of water purification. With a single exception, all the witnesses expressed preference for a supply of originally pure water over a purified polluted one. Lawrence is the only city in Massachusetts using Merrimack water for drinking. It consumes an extraordinary amount of bottled water the cost of which in 1916 was about 55 per cent. of the amount paid for public water for all purposes. The plan contemplates the taking of 200 million gallons per day from the Merrimack at Tyng's Island, just below the New Hampshire line. That is about one-quarter of its flow. Factories below the proposed takeout would be liable to suffer damage from the diversion. The stream is navigable below Haverhill and it is not certain whether the taking of that amount would be permitted by the Government. The master says: "I find the taking from the Merrimack ought not to be imposed upon the Boston District. Because first the water is a polluted water and Massachusetts has no adequate control of the pollution or adequate remedy to cure it; that the water is of quality much inferior to the Ware and Swift and the proposed project inferior from an engineering standpoint to the reservoir and tunnel which the Ware and Swift development involves."

The Massachusetts legislation confines itself to the taking of certain waters of the Ware and Swift. The Secretary of War has imposed additional limitations. Massachusetts declares that she intends to divert no more water than the Secretary of War permits and that she will in every way follow the conditions he imposes.

The exceptions filed by Connecticut need not be set forth or considered in detail. The governing rule is that this Court will not exert its extraordinary power to control the conduct of one State at the suit of another, unless the threatened invasion of rights is of serious magnitude and established by clear and convincing evidence. *New York* v. *New Jersey*, 256 U. S. 296, 309.

Missouri v. *Illinois*, 200 U. S. 496, 521. The burden on Connecticut to sustain the allegations on which it seeks to prevent Massachusetts from making the proposed diversions is much greater than that generally required to be borne by one seeking an injunction in a suit between private parties. *North Dakota* v. *Minnesota*, 263 U. S. 365, 374. There has been brought forward no adequate reason for disturbing the master's findings of fact. They are amply sustained by the evidence and are adopted by the Court.

Connecticut suggests that, under the common law in force in both States, each riparian owner has a vested right in the use of the flowing waters and is entitled to have them to flow as they were wont, unimpaired as to quantity and uncontaminated as to quality. It maintains that the taking of waters from the Ware and Swift infringes vested property rights in that State which cannot be taken without its consent against the will of the owners. And it insists that this Court, following the law enforced by each of the States within its own boundaries, should grant injunction against any diversion from the watersheds of these rivers.

But the laws in respect of riparian rights that happen to be effective for the time being in both States do not necessarily constitute a dependable guide or just basis for the decision of controversies such as that here presented. The rules of the common law on that subject do not obtain in all the States of the Union, and there are variations in their application. The doctrine of appropriation prevails in some States. And every State is free to change its laws governing riparian ownership and to permit the appropriation of flowing waters for such purposes as it may deem wise. *United States* v. *Rio Grande Irrigation Co.*, 174 U. S. 690, 702.

For the decision of suits between States, federal, state and international law are considered and applied by this Court as the exigencies of the particular case may require. The determination of the relative rights of contending States in respect of the use of streams flowing through them does not depend upon the same considerations and is not governed by the same rules of law that are applied in such States for the solution of similar questions of private right. *Kansas* v. *Colorado*, 185 U. S. 125, 146. And, while the municipal law relating to like questions between individuals is to be taken into account, it is not to be deemed to have controlling weight. As was shown in *Kansas* v. *Colorado*, 206 U. S. 46, 100,

such disputes are to be settled on the basis of equality of right. But this is not to say that there must be an equal division of the waters of an interstate stream among the States through which it flows. It means that the principles of right and equity shall be applied having regard to the "equal level or plane on which all the States stand, in point of power and right, under our constitutional system" and that, upon a consideration of the pertinent laws of the contending States and all other relevant facts, this Court will determine what is an equitable apportionment of the use of such waters. *Wyoming* v. *Colorado*, 259 U. S. 419, 465, 470.

The development of what Mr. Justice Brewer, speaking for the Court in *Kansas* v. *Colorado*, 206 U. S. 46, 98, refers to as interstate common law is indicated and its application for the ascertainment of the relative rights of States in respect of interstate waters is illustrated by *Missouri* v. *Illinois*, 200 U. S. 496; *Kansas* v. *Colorado*, *supra*; *Wyoming* v. *Colorado*, *supra*, and *Wisconsin* v. *Illinois*, 278 U. S. 367; 281 U. S. 179. Two of these cases are much like the one at bar.

Kansas v. *Colorado* was a suit to prevent the latter from withholding waters of the Arkansas river from flowing as they were wont through Kansas. The common law rule as to riparian ownership was then generally recognized in Kansas while in Colorado the doctrine of appropriation prevailed. The Court held that the upper State was not entitled to use the waters of the Arkansas flowing therein as it chose regardless of resulting conditions or impairment of the right to the use of such waters in the lower State. It was shown that, without diversion from the watershed, the waters of the Arkansas in Colorado were and for many years had been used to irrigate and make productive what theretofore had been barren lands. It was found that the resulting diminution of the flow of the river caused perceptible injury to a portion of the valley in Kansas but that it had been of little, if any, detriment to the great body of the valley. The Court held (206 U. S. at p. 114) that the rule of equality of right forbade interference with the existing withdrawals of water in Colorado.

In *Wyoming* v. *Colorado* the former sued to prevent a diversion of the waters of the Laramie river which rises in Colorado and flows into Wyoming. Both States are in the arid region and apply

the doctrine of appropriation. Wyoming objected on the ground that the diversion was to another watershed. The Court held (p. 467) that: "The principle of such diversions being recognized in both States, its application to this interstate stream does not in itself afford a ground for complaint, unless the practice in both be rejected in determining what, as between them, is reasonable and admissible as to this stream, which we think should not be done." The problem there presented was expressed as follows (p. 467): "We are thus brought to the question of the basis on which the relative rights of these States in the waters of this interstate stream should be determined. Should the doctrine of appropriation, which each recognizes and enforces within her borders, be applied? Or is there another basis which is more consonant with right and equity?" After an elaborate discussion of the facts, the Court said (p. 470): "We conclude that Colorado's objections to the doctrine of appropriation as a basis of decision are not well taken, and that it furnishes the only basis which is consonant with the principles of right and equity applicable to such a controversy as this is."

It is very clear that, under earlier decisions here, the strict rules for which Connecticut contends are not necessarily controlling in this case. There is nothing in the master's findings of fact to justify an inference that any real or substantial injury or damage will presently result to Connecticut from the diversions by Massachusetts authorized by the Acts of 1926 and 1927 as limited and defined by the Secretary of War. No discussion is required as to the effect of the proposed diversion upon the navigability of the river, agriculture, fish life or pollution in Connecticut.

The proposed taking of the waters of the Swift and Ware will not affect the present dam, works or production of power at King's Island. While the owning company has secured authority to build the higher dam, it has not resolved so to do. It is not found and there is nothing to show that it intends to construct any dam or works of a kind or capacity that, if now in use, would be injuriously affected by such diversion. At most there is a mere possibility that at some undisclosed time the owner, were it not for the diversion, might construct additional works capable of using all of the flow of the river including the waters proposed to be taken by Massachusetts. Injunction will not issue in the absence

of actual or presently threatened interference. The facts disclose no basis for relief in respect of that property. *New York* v. *Illinois*, 274 U. S. 488. *New Jersey* v. *Sargent*, 269 U. S. 328, 331, 338.

Drinking and other domestic purposes are the highest uses of water. An ample supply of wholesome water is essential. Massachusetts, after elaborate research, decided to take the waters of the Ware and Swift rather than to rely on the sources in the eastern part of the Commonwealth where all are or are liable to become polluted. We need not advert to other considerations, disclosed by the evidence and findings, to show that the proposed use of the waters of the Ware and Swift should not be enjoined.

Connecticut maintains that the presently proposed diversion will not be adequate for the future needs of the Boston district and that the size and character of the works as well as legislative reports and other circumstances disclose an intention on the part of Massachusetts, when the need shall arise, to draw from other rivers—Millers, Deerfield, Quaboag and Westfield—tributary to the Connecticut and insists that the decree should restrain Massachusetts forever from increasing its diversion to an amount in excess of what the Secretary of War has already indicated would cause no damage to the navigation of the Connecticut.

The scope of the project is that shown by the Acts as limited by the determination of the War Department. It involves no diversion from streams other than the Ware and Swift. Massachusetts declares that she intends to and must obey these findings of the War Department. Her statements before the master and here clearly negative any threat, intention or purpose to make any diversion of water in excess of that specified or otherwise than as set forth in the determinations of the War Department. Injunction issues to prevent existing or presently threatened injuries. One will not be granted against something merely feared as liable to occur at some indefinite time in the future. *New York* v. *Illinois*, *supra*. *New Jersey* v. *Sargent*, *supra*.

Connecticut's bill of complaint will be dismissed without prejudice to her right to maintain a suit against Massachusetts whenever it shall appear that substantial interests of Connecticut are being injured through a material increase of the amount of the waters of the Ware and Swift diverted by or under the authority of Massachusetts over and above the quantities authorized by the

Acts of 1926 and 1927 as heretofore limited by the War Department. Each party will pay its own costs, one-half of the expenses incurred by the special master and one-half the amount to be fixed by the Court as his compensation.

Counsel for Massachusetts will prepare a form of decree in consonance with this decision and furnish a copy to counsel for Connecticut within fifteen days; and, within ten days after such submission, the draft decree together with suggestions in behalf of Connecticut, if any, will be submitted to the Court.

A true copy.

Test:

Clerk, Supreme Court, U. S.

SUPREME COURT OF THE UNITED STATES.

No. 12, Original.—October Term, 1930.

The State of Connecticut,
vs.
The Commonwealth of Massachusetts.

[March 23, 1931.]

Decree.

This cause came on to be heard upon the pleadings, evidence, and the exceptions filed by the complainant to the Report of the Special Master, and was argued by counsel. The Court now being fully advised in the premises and for the purpose of carrying into effect the conclusions set forth in the opinion of this Court announced February 24, 1931,

It is now here Ordered, Adjudged and Decreed as follows:

First that the Bill of Complaint herein be and the same hereby is, dismissed without prejudice to the right of the complainant to maintain a further suit against the defendant at any time in the future when it shall appear that substantial interests of the State of Connecticut are in fact being injured, or are about to be injured, through a material increase of the amount of the waters of the Ware River and of the Swift River diverted or to be diverted by, or under the authority of, the Commonwealth of Massachusetts, over and above the quantities authorized to be diverted by the provisions of Chapter 375 of the Acts of 1926 and by Chapter 321 of the Acts of 1927 of the General Court of the Commonwealth of Massachusetts, as said quantities have heretofore been limited by two certain findings of the Secretary of War of the United States, acting upon the recommendation of the Chief of Engineers of the United States Army, dated respectively March 14, 1928, and May 11, 1929, and more fully set out in Appendix B and Appendix C of the Reprint of the Answer of the Defendant herein, filed January 20, 1930, and of Record in this cause.

Second that each party shall pay its own costs, together with one-half of the expenses incurred by the Special Master, Charles W. Bunn, Esquire, of St Paul, Minnesota, and one-half of the amount fixed by the Court as the compensation of the Special Master.